Reply to April 20, 2007

## **AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator roll rotatably installed inside the suction port, a plurality of brushes being

arranged on the agitator roll in the length direction;

an agitator roll driving unit including a rotating driving motor having a drive shaft with a

rotating lever attached thereto for driving the agitator roll to perform reciprocating rotation of the

agitator roll in a predetermined angle range and a driving force transmitting unit for transmitting

the driving force of the driving motor to the agitator roll; and

a resonance unit for resonating the reciprocating rotation of the agitator driving unit,

wherein the resonance unit comprises a spiral spring of which an end is fixed to the motor

shaft of the driving motor, and another end is fixed to the driving motor or the casing.

2. (Canceled)

3. (Previously Presented) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator rotatably installed inside the suction port, a plurality of brushes being arranged

on the agitator in the length direction;

an agitator driving unit for driving the agitator to perform reciprocating rotation in a

predetermined angle range; and

JTE/RJW:tm

Attorney Docket No. 0630-1903P

Reply to April 20, 2007 Office Action

Page 3

a resonance unit for resonating the reciprocating rotation of the agitator driving unit;

wherein the agitator driving unit comprises:

a driving motor for generating a driving force for performing forward/backward

reciprocating rotation in a predetermined angle; and

a driving force transmitting unit for transmitting the driving force of the driving motor to

the agitator; and

Application No.: 10/748,297

Art Unit 1744

wherein the driving force transmitting unit comprises:

a rotary link fixed to a motor shaft of the driving motor and rotated coaxially to the motor

shaft;

a hinge bracket fixed to one side of the outer circumference of the agitator; and

a connecting rod of which an end is hingedly connected to a position of the rotary link

eccentric from the rotation center of the rotary link, and another end is hingedly connected to the

hinge bracket.

4. (Original) The suction head of claim 3, wherein the resonance unit comprises a

pair of coil springs of which one side ends are fixed to both ends of the rotary link, and the other

side ends are fixed to the driving motor or the casing.

5. (Canceled)

Reply to April 20, 2007 Office Action

Page 4

6. (Previously Presented) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator rotatably installed inside the suction port, a plurality of brushes being arranged

on the agitator in the length direction;

an agitator driving unit for driving the agitator to perform reciprocating rotation in a

predetermined angle range; and

a resonance unit for resonating the reciprocating rotation of the agitator driving unit;

wherein the agitator driving unit comprises:

a driving motor for generating a driving force for performing forward/backward

reciprocating rotation in a predetermined angle; and

a driving force transmitting unit for transmitting the driving force of the driving motor to

the agitator; and

wherein the resonance unit comprises a torsion bar positioned in the agitator coaxially to

a central axis of the agitator, the torsion bar of which an end is fixed to the agitator, and another

end is fixed to the casing.

7. (Previously Presented) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator rotatably installed inside the suction port, a plurality of brushes being arranged

on the agitator in the length direction;

an agitator driving unit for driving the agitator to perform reciprocating rotation in a

Attorney Docket No. 0630-1903P

Reply to April 20, 2007 Office Action

Page 5

Art Unit 1744

predetermined angle range; and

Application No.: 10/748,297

a resonance unit for resonating the reciprocating rotation of the agitator driving unit;

wherein the agitator driving unit comprises a forward/backward rotation motor for

generating a driving force for performing forward/backward reciprocating rotation in a

predetermined angle, a motor shaft of which being connected to the agitator, coaxially to the

central axis of the agitator.

8. (Original) The suction head of claim 7, wherein the resonance unit comprises a

spiral spring of which an end is fixed to the motor shaft of the driving motor, and another end is

fixed to the driving motor or the casing.

9. (Previously Presented) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator rotatably installed inside the suction port, a plurality of brushes being arranged

on the agitator in the length direction;

an agitator driving unit for driving the agitator to perform reciprocating rotation in a

predetermined angle range; and

a resonance unit for resonating the reciprocating rotation of the agitator driving unit;

wherein the resonance unit comprises a torsion bar positioned in the agitator coaxially to

a central axis of the agitator, the torsion bar of which an end is fixed to the agitator, and another

end is fixed to the casing.

10. (Previously Presented) The suction head of claim 1, wherein the brushes are

evenly arranged at regular intervals in the length direction of the agitator roll.

11. (Previously Presented) The suction head of claim 1, wherein the brushes are

arranged in a plurality of rows in the length direction of the agitator roll.

12. (Original) The suction head of claim 1, further comprising a suction nozzle

installed inside the casing, for collecting the alien substances sucked from the suction port, a

volume of which being reduced from the suction port to the opposite side.

13. (Previously Presented) A suction head for a vacuum cleaner, comprising:

a casing having a suction port for sucking alien substances from the floor;

an agitator rotatably installed inside the suction port, a plurality of brushes being arranged

on the agitator in the length direction;

an agitator driving unit for driving the agitator to perform reciprocating rotation in a

predetermined angle range; and

Art Unit 1744

a resonance unit for resonating the reciprocating rotation of the agitator driving unit;

wherein the resonance unit comprises a spiral spring of which an end is fixed to the motor

shaft of the driving motor, and another end is fixed to the driving motor or the casing.